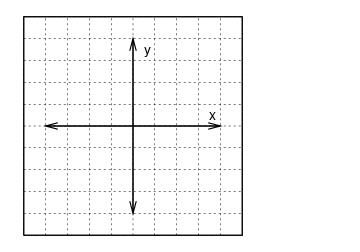
Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Algebra II, Chapter 4 Test

Show all work. Simplify answers. Only give decimal answers on word problems. Place a star in the bottom right-hand corner of this page so I know you read these directions.

1. For y=x2-4x+3, find the following:

(You may want to answer the questions in a different order than listed.)



a) axis of symmetry

b) vertex

c) state if the vertex is a maximum or minimum

d) x-intercepts

e) write function in vertex form

f) graph

2. Write a quadratic function in intercept form whose graph has x intercepts of 3 and 7 and it goes through the point (6, -9).

3. Describe how the following graph is shifted. Talk about all parts: y=2(x-3)2+10

For 4-6, solve the equation by factoring, completing the square, or using the quadratic formula. That means, every problem will have an answer.

4. x2 +4x-21=0 5. 2x2 + 5x -3 6. x2 +6x = -15

7. Solve by completing the square: 2x2 +24x+36=0

For 8-9, simplify:

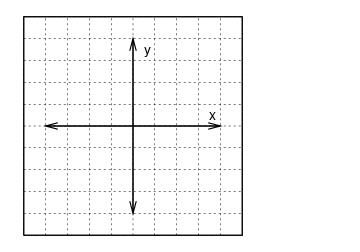
8.  9. (4 + i)- (2 -3i)

10. An object is launched upward with an initial velocity of 64 feet per second from a platform 80 feet high. It can be modeled by the equation h=-16t2 + 64t+80.

a) How many seconds before the object hits the ground?

b) How many seconds until the maximum height is reached?

c) What is the maximum height?



11. Graph y > x2 + 7x +12 AND list the x-intercepts

Bonus: Write y=2(x-3)(x-4) in standard AND vertex form.